

HYPERTENSIONWATCH

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BLOOD PRESSURE MONITORS

Morning BP "Blind Spot" Exists in Current Treatment...

In an editorial in the *American Journal of Hypertension* (February 1, 2005), Kazuomi Kario, MD, PhD, identified 2 forms of morning hypertension, each with different possible effects:

1. Persistent high blood pressure (BP) from nighttime to morning (nocturnal hypertension), means a greater risk for damage to the brain, heart, kidneys, and cardiovascular episodes.
2. The morning BP surge is associated in part with the extreme-dipping status of nocturnal BP, which studies have shown increases the odds of stroke.

Although once-daily hypertension medications are widely prescribed, in patients taking the medications (even those with clinic BP well-controlled), the morning BP level before taking medications is often high.

"Therefore, morning hypertension is the blind spot in the current clinical practices for hypertension," said Dr. Kario. He recommended home BP monitoring and more specific management targeting morning hypertension to produce a better outcome in stroke prevention.

...And More Emphasis Is Needed on Detecting Morning Surge

Morning hypertension is masked in 50% or more of patients, even in well-controlled patients taking standard blood pressure (BP) medication, according to Kazuomi Kario, MD, PhD. In Dr. Kario's 2004 book *Clinician's Manual on Early Morning Risk Management in Hypertension*, he explained that the detection of morning hypertension by home BP monitoring or ambulatory BP monitoring and the strict home BP-guided antihypertension treatment (particularly targeting morning hypertension) would more effectively thwart cardiovascular occurrences in patients with hypertension.

High BP in Pregnancy May Increase Risk Later in Life

Pregnant women with high blood pressure (BP) face greater odds of stroke, heart disease, and kidney disease later on. Researchers analyzed data from 4782 patients who had a greater family risk of high BP and who were participating in the National Heart, Lung, and Blood Institute Family Blood Pressure study from 2000 to 2005.

Women who had high BP during pregnancy had 2 times the risk of stroke, 1.5 times the risk of heart attack, and 1.5 times the risk of developing high BP after age 40. The findings were reported at the annual meeting of the American Society of Nephrology.

Stroke Risk Rises in the Morning

Seniors who experience a sharp increase in blood pressure (BP) during the first 2 hours of the morning face an increased risk of stroke, and the association is linked with silent strokes (cerebral infarcts).

All of the patients in a study underwent ambulatory BP monitoring (24-hour continuous BP measurement) and a magnetic resonance imaging scan to determine the presence of silent strokes. The patients were divided into 2 groups. The morning surge (MS) group included 53 patients who had a morning BP increase of 55 mm Hg or greater. The control group included 466 patients who had a morning BP increase of less than 55 mm Hg.

The findings indicated that 57% of the MS group was more likely to have multiple silent strokes, compared with 33% of the control group. The researchers also found that a 10-mm-Hg increase in morning BP increased the risk by 22%.

The researchers suggested that a patient's morning BP surge could be a new target for drug treatment. The study, reported in the March 3, 2003, issue of *Circulation*, emphasized the need for patients to monitor their BP at home to determine whether they experience morning hypertension.

Does Ethnicity Play a Role in Morning BP?

Blacks have 2 times the risk of experiencing a stroke, compared with whites. In a groundbreaking study, researchers examined morning blood pressure (BP) surge differences between both groups and the increased potential for stroke. For the study, reported in the *Journal of Clinical Hypertension* (April 2005), black (n = 183) and white (n = 139) participants aged 18 to 65 were studied with 24-hour ambulatory BP monitoring.

Morning surge was defined as morning BP minus the trough BP during sleep. The findings showed that morning surge was significantly lower in blacks, compared with whites (23 mm Hg vs 27 mm Hg). After factoring in gender, age, and body mass index, the researchers found that the relationship was no longer evident. The researchers concluded that morning BP surge is not a potential mediator of the difference in stroke rates between both groups.

The findings also underscore the need for patients to monitor their BP at home, because it provides key information between physician visits. Furthermore, the only way to determine whether lifestyle changes or medications are working is to check BP regularly.

FAST FACT: Morning blood pressure rises remain untreated in 50% of patients who receive treatment for hypertension.